AUTOMOTIVE SECTION

WAR DEPARTMENT NOT TO SELL CARS

AUTOMOTIVE SECTION

PUSHING THE CAR TESTS BEARINGS

In the selection of bearings for his car or truck, the manufacturer takes into consideration two things: cost and performances, according to A. K. Hebnerd, general manager, Bearings Service company, Detroit. With bearings, more than with any other parts of his product, the manufacturer is more inclined to place performance before cost.

The same quality cannot reasonably be looked for, however, in the low-cost car that can be expected in the costly car. Generally you can test out some of the bearings of a car simply by pushing it. It will be found that a high priced car, even when much heavier, can sometimes be moved more easily than a lighter, low-cost car, due to its better bearings.

There are three classes of installations. The first includes bearings on the fan shaft, the clutch and the starting motor, the steering gear, and so on, but these can not be considered, because at these points bearings are not put to any severe test, and initial cost and convenience of installation become the determining factors.

The second class includes the transmission, pinion shaft, or worm, and differentials, where the extremely important shafts and gears deliver power to the wheels, are supported by antifriction bearings. Even slight wear in the bearings at these points—unless corrected—allows shafts to drop out of true alignment and throws gears out of perfect mesh. Loss of power and excessive wear on the teeth of the gears inevitably follows the use of inferior bearings at these points.

The third class includes the wheel hubs, where the bearings have to work under the tremendous pressure of the car's weight and are also subject to the shocks and vibration incident to travel over rough roads.

Bearings not properly maintained at the wheel hubs, pinion and worm will soon show the evil effects of carelessness on the part of the mechanic or motorist, as will the transmission and differential bearings, although to a less extent. These evil effects will not be apparent only in the bearings themselves, but will also show in the performance of gears, the accurate adjustment of which may be destroyed with ruinous results.

WAR DEPT. NOT TO SELL ANY AUTOS

The director of sales of the War Department has approved the transfer of the entire present surplus of serviceable motor equipment held by the army in the United States to other Government departments.

This action is in accordance with Congressional policy as outlined in the Postoffice appropriation acts approved July 2, 1918, and in February 28, 1919, and act approved March 3, 1919, outhorizing the Secretary of the Treasury to provide hospital facilities for discharged soldiers, sailors, and marines. By the appropriation act of July 2, 1918, authorization was given for the transfer of surplus motor equipment to the Postoffice Department, and the act of February 28, 1919, embraced similar authorization for the transfer of any part of this surplus stock to the Department of Agriculture. By the act of March 3, 1919, the Secretary of War was directed to transfer surplus motor equipment to the Public Health Service.

The transfer disposed of approximately 39,100 vehicles, including 3,600 motorcycles, 5,500 passenger cars and about 30,000 trucks. The Postoffice Department will receive 10,064 of these vehicles; the Public Health Service, 1,396, and the Bureau of Public Roads, Department of Agriculture, 27,983.

Because of their special design or condition, a very limited number of passenger cars and trucks included in the surplus stock has already been found to be unserviceable for Government use. These, and such others as may later be culled out for similar cause in the course of the inspection, which will be made incident to the transfer to the other governmental agencies, will be sold at public auction at the various camps and storage yards at which they have been collected, after the sales have been duly advertised through the press.

Erroneous reports to the effect that the War Department would offer to the public a large stock of motor equipment, including new passenger automobiles, have been widely circulated. It was never the intention of the War Department, in view of above mentioned acts of Congress, to so dispose of its motor vehicles. It has consistently followed the policy of transferring all such vehicles as promptly as they were declared surplus, to the Postoffice Department, the Department of Agriculture, the Public Health Service, or by sale to other Governmental agencies requiring such equipment.

RUBBER FACTORIES' WAR VETERANS IN BIG PARADE

The Chamber of Commerce of Akron, Ohio, is completing plans for holding a mammoth parade on the Fourth of July to honor the soldiers who participated in the world war. Each of the big rubber factories of the city will be represented by its ex-service men. The Goodyear Tire and Rubber Company now has 5,500 men in its employ who saw service with our army and navy forces, all of whom will march as a unit in the pageant.

Auto Racing, With Death Toll, Cheapest Road To Progress, Says 'High Ace'

INDIANAPOLIS, June 2—Capt. E. V. Rickenbacker, American "Ace of Aces," and one of the world's premier racing drivers before horsook the speed sport for the read of the sky, contradicts the opinion recently advanced in some quarters, sat automobile racing serves no useful purpose, and that, consequently it ought to be abolished, to avoid he recurrence of such events as marred the Liberty Sweepstakes race, Jay 31.

"It is with a good deal of regret," says Captain Rickenbacker, "that I note the adverse sentimen current in some sections against automobile racing, as the result of se three fatalities that happened dring the Indianapolis 500-mile Liberty Sweepstakes race at Indianapolis, at which I officiated as referee. The death of any man is a sad thin, with many pathetic consequences in its wake, and if it served no other prpose than to make a Roman holida, as has been charged, with referene to automobile racing, it would, indeed, be inexcusable.

Once Was Ans Racer.

"Now, it so happes that prior to entering the United States air service I was identified with automobile racing for a good many years, and consequently am nce familiar than is the average individual with the useful, and I may ay right now indispensable, role plyed by the sport in the developmentof automobile design, engineering, and metallurgical discovery, as applid both to the automobile and the arplane. Stop and consider that a contest such as an Indianapolis 500-mi race tests every part of a motor car's mechanism more severely than two years of ordinary usage, and you wil get an idea of how racing has speeed up engineering progress.

"In the last Liberty Sweepstakes race accident bu one was due to defective wheels, wheels that apparently were sound, but under the crucial strain of sustained high speed revealed themelves in their true light. The sane wheels would have given good service under ordinary touring conditons for one or two years, perhap, and then suddenly crashed, to thewiping out possibly of an entire family, as has often happened in touring accidents.

"The discoveries of the last Indianapolis race will enable wheel manufacturers to improve their product so that occurrences, such as those who produced fatalities during the contest will be impossible in the open road. Who shall say then, in view of this fact, that the Liberty Sweepstakes race did not serve a useful purpose?

Perfection of Mechanism.

"Any one who drives an automobile has often reflected upon what would happen if his steering apparatus would break, leaving him helpless at the wheel of an uncontrollable car, and great has been the wonder that this delicate contrivance rarely gives any trouble. As a matter of fact the perfection of steering mechanism is one of the chief contributions of automobile racing to the safety of motoring. Designs that were thought good engineering practice wers quickly shown to be most dangerous when subjected to the test of extreme speed, and consequently discarded before they had opportunity to work mischief in the field of every day use.

"The same thing applies to all other parts of an automobile with respect to safety. Frames, axles, wheel spindles, bearings, tires, the proper design and materials for these were arrived at much more quickly through racing and with much less loss of life than would have been possible had automotive progress not had the assistance of racing.

"Also don't forget that racing calls into play the keenest engineering minds in a constant struggle to produce more horsepower, more energy, with less weight—an endless reaching out into new fields for the purpose of increasing efficiency and economy in gasolene consumption. To increase engine efficiency new types of valve action have been invented, different cylinder arrangements have been tried, all kinds of manifolds built, every piece gone over with a view to possible improvement, while the endeavor to reduce weight has proved a stimulus to the metallurgical arts, resulting in the invention of steels of unheard of lightness, combined with surpassing strength.

"The new lightweight car of the future, combining comfort and roominess with low operating cost, both as regards gasolene and tires, will owe its existence more to racing than any other factory.

"And looking back for a moment to the recent days of war, what do you suppose would have been the position of allied aircraft manufacturers but for the experience of racing? Every engine that went into an allied airplane, from the English Sunbeam through the Hispano-Suiza and Fiat to the American Liberty, incorporated principles developed in the field of automobile racing, and which, without racing, could not have been developed in time to be of service. True, we are not supposed to have wars any more, but as long as the possibility is present, it will not do to ignore automobile racing as a factor in determining the safety of the nation.

"Summing up the case of automobile racing, I would say that it is indispensable to modern progress, at least as far as events like the Indianapolis races and the French grand prix contests are concerned, where the new ideas and theories of the most prominent builders of both the new and old continents are tested in actual competition.

"For next year, the Indianapolis speedway management has announced that its contest will be for cars of 183 cubic inches piston displacement, coinciding with recently formulated plans for the French grand prix. Every other year, since the Indianapolis races were begun, there has been a marked reduction in engine size, starting with unlimited sizes prior to 1911, and progressing through 600 cubic inches for 1911 and 1912, 450 cubic inches for 1913 and 1914, and 300 cubic inches for 1915, 1916 and 1919, to the newly announced size of 183 cubic inches.

Underlying Motive.

"Here is written, in language so clear that none can mistake it, the underlying motive and purpose of automobile racing—the application of a constant stimulus to engineers and manufacturers to develop new principles, to increase efficiency, to make one ounce of fuel do what two did before, to conserve natural energy and advance human progress.

"There are probably more cars approximating in engine size the new 183 cubic inch specifications of the Indianapolis Motor Speedway Company than all the other sizes of cars put together, and the utility of the sport of automobile racing will consequently be increased many times as the result of the new policy, even more than was the case with previous engine reductions.

"It is not likely that cars of this size will be able to attain the extreme speeds of their predecessors for perhaps a year or two; it will take that long to perfect them. As soon as they reach the limit of their efficiency, the minute there is nothing further to be learned concerning their improvement, the master minds of the racing sport can be depended on to make still further reductions, until the ultimate point of engineering development in the field of automotive industry has been reached. This is the real aim of automobile racing. The spectacle is but a means for arousing public interest in what has been accomplished, and not an end in itself. If I can do anything to clear up any existing impression to the contrary, I shall consider that I have rendered a signal service to human progress and to civilization."

TELL HOW TO ORGANIZE RURAL MOTOR EXPRESS

The national motor truck committee of the National Automobile Chamber of Commerce, has issued a booklet giving information on the proper method of organizing a rural motor express line. The booklet calls attention to the services which can be rendered by rural motor express lines and it tells how the scale of charges must be determined and what details should be noted in making a preliminary survey of the route over which trucks are to travel. It tells how the canvass of prospective customers can be carried out; how the owner can boost his business by an advertising campaign. It also gives vital suggestions concerning operating methods and how to deal with farmers.

The booklet is written especially for individual carriers and small operators, and contains a great deal of information which the prospective operator should know.

SPRINGS PROTECT MOTORS OF AUTOS

Springs are a great deal more important to the motor than to the giant locomotive. In the motor car the springs must afford something else besides riding comfort—they must protect the power plant from the continuous bouncing over ruts and bad roads that lifts the wheels from the ground and brings them down with a smashing crash.

The locomotive does not have to run over these roads. It has a solid, smoothly polished rail on which to travel. Yet, even with its truck springs, driving springs and equalizing beams, the locomotive does not last so long as the motor car. Imagine how long the locomotive would stand up traveling through deep sand, rough and rutty roads and gravel turnpikes that are full of hidden boulders. Still this is precisely the kind of roads that the motor car must go through day after day.

Now, the law of mechanics, from which the basis of all locomotion is figured, teaches us that it is a difficult thing to keep a high-speed motor running on a solid foundation—a still more difficult thing to keep it running right on a foundation moving in one direction on a level path—and a vastly more difficult proposition to keep a motor running on little or no foundation at all, and continually moving not only forward, but sidewise and up and down.

It is really a mystery of the age that the motor car power plants have stood this hammering day after day as well as they have, when we consider that the engine must resist this wrenching, the bearings must absorb these shocks without cramping, and the bolts and nuts must endure these strains.

The American automotive engineers have given a great deal of thought and study to the springs as a protector to the power plant, and the Paige engineers, alert to every engineering practice that makes for longer life in motor cars, have after many rigid tests, adopted the cantilever type springs and carefully proportioned them to keep them horizontal and in this way prevent excessive motion.

As a result of this method of placing springs, the car slips over the ruts and rough roads, and the springs cushion the up and down motion, instead of meeting these ruts head-on and bouncing over them and jarring the occupants.

GOODYEAR EMPLOYES IN BIG ARIZONA FIELD MEET

PHOENIX, Ariz., June 28.—An established institution at each of the several subsidiaries of the Goodyear Tire and Rubber Company is an annual field day for employes. At the main plant at Akron, Ohio, the cotton mills at Goodyear, Conn., and the cotton plantations at Phoenix, Ariz., are held some of the most unique field and track meets staged anywhere in America.

The annual affair held at Phoenix, Ariz., is the only field meet held in the State. The big one just promoted there was one of the most successful ever held in the West. Athletes from the two Goodyear plantations matched their abilities in the keenest rivalry. Among the events not usually found in field sports in the East was a bucking broncho contest, in which real Western broncho busters contended for supremacy, furnishing many "thrillers" for the vast crowd in attendance, while moving picture men from the coast cranked away roll after roll of film.